

## ABSTRACT OF THE DISCLOSURE

A nested transimpedance amplifier (TIA) circuit includes a zero-order TIA having an input and an output. A first operational amplifier (opamp) has an input that communicates with the output of the zero-order TIA and an output. A first feedback resistor has one end that communicates with the input of the zero-order TIA and an opposite end that communicates with the output of the first opamp. A capacitor has one end that communicates with the input of the zero-order TIA. The gain-bandwidth product of the nested TIA is increased. Differential mode TIAs also have increased gain-bandwidth products.

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